Fighting against the Opioid Epidemic

The United States is currently facing a major opioid epidemic, and Direct Relief—a nongovernmental, nonsectarian, and not-for-profit humanitarian aid organization—is determined to help in the fight against it. Direct Relief has partnered with Pfizer, one of the world’s premier biopharmaceutical companies, to work on a common goal: connect the supply of naloxone with community health centers and build their capacity to respond to overdose events. With the use of geographic information system (GIS) technology, that goal has become more attainable.

**The Challenge**

Direct Relief recognized that the number of opioid overdose deaths has been increasing drastically in recent years. Direct Relief wanted to figure out how to best serve the opioid-afflicted communities and their coinciding health centers. The need for a better distribution strategy for the drug naloxone, which is often used to bring someone back from an overdose, was becoming critical. The opportunity to partner with Pfizer allowed Direct Relief to strategically distribute one million doses to opioid-afflicted communities health centers across the United States.
The Solution
To improve its understanding of communities in need, Direct Relief began analyzing local demographics, using Esri’s ArcGIS Community Analyst. Community Analyst gave staff the ability to quickly and easily generate highly accurate demographic profiles for any community linked to data on opioid prescription rates, overdoses, and deaths. With the profiles, Direct Relief could target areas where interrelated factors contributed to opioid abuse and could ultimately help the communities identify the health center locations that were the best choice to respond to overdoses. Staff used Esri’s ArcGIS Pro, a powerful desktop analytics platform, to perform thorough analyses and create maps that showed US areas with high opioid prescription and overdose rates and numerous overdose-related deaths. They are also using Esri® Story Maps to engage with citizens and other stakeholders by showing compelling, interactive stories of opioid addiction and how the clinics use naloxone to save countless lives.

The Results
With Community Analyst and ArcGIS Pro, Direct Relief identified hundreds of community health centers where the naloxone distribution would be most effective. In partnership with Pfizer, Direct Relief could establish a naloxone distribution program in the areas that suffered from the highest incidence of opioid overdoses. In the first round of distribution, 30,000 doses went to 126 health centers across the country. In addition, many other clinics are using the data to take preventative measures. Direct Relief can now track how the distribution network is working and see where it might expand the program.

“Right when the program started, there were three people in Alameda County over the course of two weeks whose overdoses were reversed. Their lives were saved. That’s a big deal for us in terms of program impact. Direct Relief helps save lives at scale around the world, but knowing it was that specific person that had his life saved is rare for us.”

Andrew Schroeder
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